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ABSTRACT

This paper summarizes the first 18 months of Maryland's School Improvement through Instructional Process (SITIP) program, begun in fall 1980. Four general methods of data collection were used for the project: observation, interviews, questionnaires, and document analysis. Of Maryland's 24 local education agencies (LEAs)--Baltimore City plus 23 counties--19 submitted proposals and implemented plans responding to SITIP. Of 455 teacher-administrators at 58 schools in these 19 LEAs who were invited to respond to the general survey, 329 completed and returned it. The Maryland State Department of Education selected four categories of research-based innovations for improving academic instruction, including more active teaching and student team learning. Implementation strategies were also limited to four, from districtwide to single school (lighthouse approach). The document provides planning, training, and implementation descriptions for the roles and responsibilities of state education agency staff, local educators, central office staff, school-based administrators, and teachers. Conclusions indicate that while, for example, state education agency staff should initiate and encourage participation, build and maintain commitment, and provide assistance as resource coordinators, teachers should carry out classroom implementation and function as "project directors" if administrators do not take on that responsibility. (JBM)

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INSTRUCTIONAL IMPROVEMENT: ROLES AND RESPONSIBILITIES IN STATEWIDE CHANGE

Jane M. E. Roberts
Jane L. Kenney

Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada, April 1983.

Research for Better Schools, Inc.
444 North Third Street
Philadelphia, Pennsylvania 19123

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1. SITIP Design

Introduction

Over the past few years state education agencies (SEAs), local education agencies (LEAs), and schools have engaged in activities to make schools more effective. Many of these efforts have been stimulated by research on school and classroom effectiveness. While educational practitioners may draw upon a common knowledge base (e.g., Block & Burns, 1976; Brookover & Lezotte, 1977; Brophy, 1979; Edmonds, 1979; Rutter, et al., 1979; etc.), their decisions and actions vary from implementation of exemplary practices to use of diagnostic or monitoring procedures. Differences also occur in the degree of involvement and the nature of the tasks undertaken by the role groups involved (e.g., teachers, school-based administrators, central office staff, SEA staff).

In Maryland, the SEA initiated a voluntary statewide program designed to apply relevant research to improve instruction and increase student achievement. Four research-based innovations were selected for implementation: Active Teaching, Mastery Learning, Student Team Learning, and Teaching Variables. This program, called SITIP (School Improvement Through Instructional Process), was evaluated by Research for Better Schools (RBS) for the Maryland State Department of Education (MSDE). This paper summarizes part of that study covering the first 18 months of the SITIP program.*

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*For the complete report or executive summary, see Roberts, J. M. E., Kenney, J., Buttram, J., & Woolf, B. Instructional improvement in Maryland: A study of research in practice. Philadelphia: Research for Better Schools, 1982.

Attention is focused on:

- the factors influencing the nature and extent of the tasks undertaken by each role group
- the roles and responsibilities undertaken by each role group
- the relationships among tasks and role groups
- the impact on implementation and intended outcomes.

Evaluation Design

The initial evaluation design was drafted in the fall of 1980 (when SITIP began), and refined annually. An action research approach was used with data analyzed and reported back by RBS to the MSDE team within ten days of a critical event or (for the last eight months of the study) on a monthly basis.

The general areas of activity examined included: training offered by MSDE, local plans and planning, local implementation, and technical assistance (TA) offered by MSDE. Table 1 summarizes SITIP activities in each area. Table 2 presents an overview of the data collection for these areas. The methods used to collect the data and the data sources listed in Table 2 are discussed briefly in the following sections.

Measures and Methods of Data Collection

Four general methods of data collection were used: observation, interviews, questionnaires, and document analysis.

- Observation. With one exception, all formal training and planning events conducted by MSDE were observed.* In addition, the monthly meetings of the technical assistants (TAs) were observed (November 1981 - June 1982), and two observations were made at schools in each of the eight LEAs selected as pilot sites for the study. In all cases, comprehensive notes were taken of activities observed.

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*The exception was the awareness conference on Student Team Learning, January 7, 1981. Inclement weather prevented observer attendance.

Table 1

SITIP Chronology of Events
December 1980 - September 1982*

Activity Area	SEA Activities	LEA Activities	Dates
Planning	Preparation/program design		July - October 1980
	Invitation for local commitment	Review, response of commitment	October - November 1980
Training	Four awareness conferences	Attendance of teams at awareness conferences	December 1980 - Feb. 1981
Planning	Request for local proposals	Submission of proposals (19 LEAs)	March - April 1981
Assessment	Analysis of local response to conferences and of proposals		April 1981
Planning	Four spring planning sessions	Attendance at spring planning sessions	April - May 1981
Assessment	Analysis of local response to spring planning sessions		May 1981
Training	Four summer institutes	Attendance at institutes	June - July 1981
Planning	Fall planning session	Attendance at session, revision of plans	September - November 1981
Technical Assistance	Follow-up training sessions (1 or 2 per innovation) plus on-site coaching etc.	Attendance at follow-ups	Sept. 1981 - June 1982
Implementation		Use of one or more innovations (19 LEAs)	Sept. 1981 - June 1982.
Assessment	Analysis of progress to date		Oct. 1981, then monthly.
		Review of findings	August 1982
Planning	Invitation to update or refine plans	Revision of plans (plus inclusion of 5 more LEAs)	August - September 1982

*SITIP: School Improvement Through Instructional Process. The SEA supports local implementation through June 1983, with on-going training, technical assistance, and assessment. However, this report relates only to activities up to the beginning of the 1982 school year.

Table 2

Overview of Data Collection (1980-82)

Question Areas	Measures/Methods	Source	Frequency/Time
1. Training offered by MSDE	- observations	conferences summer institutes follow-up sessions	4 (Dec. 1980 - Feb. 1981) 4 (June - July 1981) 6 (Dec. 1981 - May 1982)
	- questionnaires	participants of all training events	14 (Dec. 1980 - May 1982)
	- stages of concern questionnaire	participants of conferences and summer institutes	2 (Feb. 1981 & July 1981)
2. Local plans and planning	- document analysis	local plans/proposals	2 (May 1981 & Mar. 1982)
	- observation	state-led planning sessions	5 (Spring & Fall 1981)
	- questionnaire	participants of planning sessions	4 (Spring 1981)
3. Local implementation	- document analysis	public plans, reports	On-going
	- observations - follow-up feedback form	participants of follow-up sessions	6 (1 or 2 per topic as scheduled)
	- observations - interviews	staff of pilot sites	16 (2 per pilot site as scheduled)
	- observations - interviews	MSDE TA staff monthly meetings	8 (1 per month)
	- phone interviews	LEA key contacts	20 (Feb. - Mar. 1982)
	- stages of concern questionnaire - general survey	all participants (455)	1 (May 1982)
4. TA offered by MSDE	- document analysis	MSDE TA staff logs	8 (1 per month)
	- observations - follow-up feedback form	follow-up session participants	6 (1 or 2 per topic as scheduled)
	- observations - interviews	MSDE TA staff monthly meetings	8 (1 per month)
	- phone interviews	LEA key contacts	20 (Feb. - Mar. 1982)
	- general survey	all participants	1 (May 1982)

- Interviews. Structured, semi-structured, and open-ended interviews were conducted with the eight MSDE TAs and with school and central office staff at the pilot sites. In addition, the 19 LEA project directors were interviewed once by phone early in 1982.

- Questionnaires. Five types of questionnaires were used: 1) Stages of Concern Questionnaire (developed at the Research and Development Center for Teacher Education, Austin Texas, 2) Awareness Conference and Summer Institute Evaluation Forms, 3) Follow-Up Feedback Form, 4) Technical Assistance Survey, and 5) General Survey.

- Document Analysis. Four kinds of materials were systematically reviewed: 1) articles about the four innovations (used as advance reading for conference participants) and materials used by the developers for training users at institutes and follow-up sessions; 2) materials developed by LEAs for inservice or classroom use; 3) plans developed by LEAs as proposals requesting funds (May 1981) and as descriptive summaries reflecting revised or refined ideas (September 1981); and 4) logs maintained by MSDE TAs recording all their SITIP-related activities (from telephone calls to follow-up sessions).

Respondent Population

Maryland's SITIP program was offered to all 24 LEAs -- Baltimore City plus 23 counties. Nineteen LEAs submitted proposals and subsequently implemented their plans. Each local team included (at least) a project director (usually central office staff), a school-based administrator, and two teachers.

Eight of the 19 LEAs were asked to cooperate as pilot sites for the purposes of this study, which meant that in addition to responding to questionnaires and the project director telephone interview, participants provided copies of locally developed materials, and hosted RBS observers for two on-site visits.

In the fall of 1981, local plans predicted that in 19 LEAs, at 58 schools, 626 teachers would have implemented SITIP topics by the end of the school year. By May 1982, 455 directly-involved implementers were identified and asked to respond to the general survey. Three hundred twenty-nine

respondents completed and returned the survey. At the state level, information was provided by the eight MSDE staff assigned to provide technical assistance, and by the assistant deputy superintendent who coordinated SITIP activities.

Results

While the focus of this paper is on responsibilities of role groups involved in instructional improvement, it is useful to examine the context in which those activities occurred. Therefore, this section first discusses factors influencing roles and responsibilities, and then discusses responsibilities undertaken by each of the four role groups, in terms of planning, training, implementation, support/technical assistance, assessment, and dissemination.

Factors Influencing Roles and Responsibilities

There were four main factors influencing the roles and responsibilities of SITIP participants: 1) the nature of the innovation -- its demands and relative complexity; 2) the implementation strategy -- whether it was school or district-based, using a capacity building, pilot/district, lighthouse, or district-wide approach; 3) the organizational norms -- local characteristics which determine decision-making and communication practices; and 4) the scope and intensity of implementation.

Nature of the Innovations. Four research-based innovations were selected by MSDE as potentially useful to all schools for improving instruction in all structured academic curricula. They were: Active Teaching, Mastery Learning, Student Team Learning, and Teaching Variables.

- Active Teaching (AT) is a system of direct instruction developed by Thomas Good and Douglas Grouws at the University of Missouri. Originally designed for the teaching of mathematics, AT consists of the following components: 1) pre-lesson development -- concepts and skills from the previous night's homework are reviewed, homework is checked and collected, and students engage in mental exercises; 2) lesson development -- prerequisite skills and concepts are briefly reviewed, new concepts are introduced via teacher explanation and demonstration, and student comprehension is assessed through controlled practice; 3) seatwork -- uninterrupted, individual, successful practice is provided in order to increase proficiency in the skills and concepts taught; 4) homework -- homework is assigned related to the concepts developed that day; and 5) review/maintenance -- weekly and end-of-unit reviews help to maintain skills and concepts taught.

- Mastery Learning (ML), developed by Benjamin Bloom and James Block, combines curriculum alignment and diagnostic/prescriptive instruction with a philosophy that all students can succeed. Essential components are: 1) developing a scope and sequence of objectives, broken down into prerequisites and component skills; 2) providing appropriate instruction aligned with the objectives to be mastered; 3) testing the student's progress in mastering the objectives through the use of a formative evaluation measure; 4) providing students who have not achieved mastery with additional corrective work in the deficient areas specified by the formative tests, and providing students who have achieved mastery with enrichment activities to reinforce and supplement learning; 5) testing final mastery of the objectives with a summative evaluation measure; and 6) recording student progress in terms of individual mastery of specific objectives. "Mastery" is usually defined as 30% of the students demonstrating success on at least 80% of the objectives in a given unit of instruction.

- Student Team Learning (STL) techniques use peer tutoring and team competition to facilitate student learning. Student Team-Achievement Divisions (STAD) and Teams-Games-Tournaments (TGT) were developed by Robert Slavin and staff at the Johns Hopkins University. Jigsaw was started at the University of Texas by Elliott Aronson who is currently at the University of California at Santa Cruz. The key factors of STL are peer interaction, cooperation, and competition.

- Teaching Variables (TV) was developed by David Helms and staff at Research for Better Schools (RBS). Two variables found to be strongly related to effectiveness of instruction and student achievement were identified: "content" and "time." The "content" variable encompasses two factors: 1) assessment of prior learning, and 2) alignment of curriculum objectives and classroom instruction to the testing instrument. The "time" variable improvement cycle involves: 1) measuring student engaged time (SET) via classroom

observation, 2) comparing SET and opportunity for improvement, 3) reviewing and selecting research-based improvement strategies, 4) implementing strategies, and 5) evaluating the effectiveness of the strategies in improving SET via additional classroom observations.

The innovations vary in complexity. Complexity was determined on four criteria: 1) knowledge -- how much that is new must be learned? 2) materials -- how much do classroom materials need to be redesigned or developed? 3) methods -- how much change is required in the way things are done in the classroom and in the school? and 4) organization -- how much role change and administrative action are required? Each innovation was rated on a scale from 1 to 5 (with 5 indicating high complexity) on each criterion, and a mean rating was assigned. (See Table 3.) As designed, the innovations in order of complexity are: Active Teaching (1.62), Student Team Learning (2.37), Mastery Learning (3.12), and Teaching Variables (3.75). As implemented, Teaching Variables was less complex than Mastery Learning since 60% of TV implementers used only the "time" variable.

Table 3

Complexity of the SITIP Innovations

Dimension \ Topic	AT	ML	STL	TV
knowledge	2	3	3	5
materials	2	4	3	3
methods - in class	2	4	4	3
methods - in school	1	3	1	3
methods (mean)	1.5	3.5	2.5	3
organization	1	2	1	4
total	6.5	12.5	9.5	15
mean	1.62	3.12	2.37	3.75

Mean ratings vary from a high of 5.00 to a low of 1.00.
AT = Active Teaching, ML = Mastery Learning,
STL = Student Team Learning, TV = Teaching Variables

AT and STL, as implemented, were simple and classroom-based requiring less support from school administrators and central office staff than ML and TV. ML and TV were complex and school-based, requiring cross-hierarchical coordination.

In looking at the data on effort expended, and comparing innovations, the following should be kept in mind:

- Active Teaching: Strategies required active involvement from all role groups. The innovation as implemented was simple and classroom-based. Scope was larger than for any other topic (38 schools, 472 teachers).

- Mastery Learning: Strategies were school-based. The innovation as implemented was complex and suggested a need for cross-hierarchical coordination. Scope was moderate (81 teachers in six schools).

- Student Team Learning: Strategies were primarily teacher-oriented or classroom-based with initial involvement or light monitoring by school administrators and central office staff. The innovation as implemented was fairly simple and classroom-based. Scope was moderate (100+ teachers in 20+ schools).

- Teaching Variables: Strategies were primarily school-based with active involvement by central office staff in three of the five LEAs. The innovation as implemented was moderately complex suggesting a need for interaction between observers and teachers observed. Scope was low (50+ teachers in six schools).

Implementation Strategies. Level of effort (i.e., time and energy an LEA was willing to invest), role group enthusiasm, and perceived local need seemed to be the three strongest factors influencing LEA selection of an implementation strategy, of which there were four: 1) district-wide, 2) pilot/district, 3) capacity building, and 4) lighthouse school.

- The district-wide strategy was used by one LEA implementing AT in all 26 elementary schools. This strategy demands the greatest level of effort (because so many people are involved); high enthusiasm by central office staff (transmitted to other role groups); and perceived need by all role groups (especially the superintendent). Since AT was the least complex innovation, district-wide implementation was feasible given available resources.

- The pilot/district strategy involves one or a few schools in the first year with commitment from central office to become actively involved in dissemination/implementation to many more schools in subsequent years. Four LEAs used this strategy: one for each innovation. This strategy requires effort and enthusiasm from all involved, particularly central office staff who usually take responsibility for involving additional schools after the first year. The extent of involvement and progress within the pilot schools was related to innovation complexity, with greater expansion probable for less complex innovations.

- Capacity building is essentially a staff development approach which encourages voluntary implementation following training conducted by those first involved with SITIP. Five LEAs selected this strategy -- four for STL and one for AT. Training was conducted mostly by teachers at three sites, mostly by central office staff at the other two LEAs, with school administrators also involved in two counties. The innovation developer also assisted in training at three of the STL capacity building sites. Both innovations implemented through capacity building (AT and STL) are classroom-focused and are less complex than ML or TV. Success related to the effort invested in training, not only in workshops but also in follow-up assistance.

- The lighthouse school strategy, used in 13 schools by ten LEAs, focuses implementation of an innovation in a single school. Success may be broadcast informally and additional schools may elect to adopt the innovation, but no formal commitment is made by central office staff to actively encourage or train others. The strategy was used for AT at two sites, for ML at five sites, for STL at three sites, and for TV at four sites. Diverse patterns of interaction and leadership evolved for this strategy, ranging from a small teacher-centered project to a cross-hierarchical team effort.

The relative value of a given strategy (in terms of institutionalization from a local perspective, or of widespread use from a more general perspective) cannot yet be determined but may become apparent in the second year of implementation. The strategy determines how the work is shared among role groups.

Organizational Norms. The term "organizational norms" was used to describe local characteristics which determined decision-making and communication practices. For instance, LEAs differ in degrees of formality,

extent of "top down" authoritarian control or school-based autonomy, and these differences influenced participants' expectations and behavior. When local norms did not facilitate SITIP implementation (e.g., when designated "leaders" were not accustomed to participatory planning, or assumed that implementation would occur with little need for their support) problems arose unless MSDE TAs intervened. Organizational norms had a strong influence on communication among role groups and on interactive support, which in turn, influenced attitudes (particularly the commitment of teachers).

Scope and Intensity of Implementation. During the 1981-82 school year, 19 Maryland school systems were involved in SITIP, 15 implementing a single innovation and four implementing two or three innovations. Over 65 schools were involved, with more than 688 teachers working with over 886 classes in all grade levels. (See Table 4.)

- School Sites. All types of schools were involved, with all grade levels from kindergarten to twelfth grade. Most teachers were voluntarily involved, but in one county all elementary teachers were required to implement AT, and in some other counties teachers were expected to participate. Contrary to conclusions drawn in other studies, no greater difficulties were experienced in secondary schools than in elementary schools. The 16+ secondary schools were involved in all strategies except the district-wide approach and used all four innovations and a variety of content areas. There were two differences between types of school during implementation: 1) secondary teachers were more likely to focus on curriculum and elementary teachers were more likely to focus on grade level; and 2) while principals were involved in both kinds of schools, if an additional "leader" was needed it was somewhat easier in secondary schools for a department head or teacher coordinator to have "free" time than for elementary teachers to have necessary arrangements made. However, both groups did attend to curriculum and grade articulation, especially for ML and TV.

- Curriculum Subjects. For three innovations (AT, ML, and TV), developers recommend implementation in basic skills, with AT focusing on mathematics and ML adding science. Academic curricula

Table 4

Scope and Intensity: All Innovations as Implemented (1981-82)

Topic	#LEAs		#Schools	#Teachers	#Classes	Grades	Subjects
	Single School	Multiple					
Active Teaching	4	1	33	472	514	1-12	M, R/LA, Sc, SS
Mastery Learning	4	2	6	81	93	K-12	M, R/LA, Sc, SS, Other
Student Team Learning	4	4	20+	105+	177+	K-12	M, R/LA, Sc, Ss, Other
Teaching Variables	3	2	6	51+	58+	1-12	M. R/LA, Sc, SS, Other
TOTAL	19		65	688	886	K-12	M, R/LA, Sc, SS, Other

Key: M = Mathematics
R/LA = Reading/Language Arts
Sc = Science
SS = Social Studies

are considered most appropriate for all four innovations. The most popular curricular areas were: reading/language arts (17 LEAs), mathematics (16 LEAs), science (12 LEAs), and social studies (11 LEAs). Participants indicated that greater student impact and acceptance by teachers occurred when innovations were used for fairly structured curriculum.

- Scope and Time. The innovations were implemented from between one month to the full school year. Within the implementation time the scope of use ranged from 5% of the time allocated to a curriculum for a given class, to 100% of the allocated time. Most time was spent for AT and ML on more structured curricular areas such as mathematics. Where STL was implemented some teachers used the innovation sporadically. Ten LEAs used the innovation for at least 50% of the time allocated for the selected subject area for at least five months.

The overall scope and intensity of implementation (number of schools, teachers, curriculum areas, and time used) were determined largely by the strategy selected, but also reflected the LEA felt need or commitment to the innovation. Planned scope was reduced during implementation if resources (time and energy) became scarce.

Roles and Responsibilities of State Education Agency Staff

Following a summary of the overall SITIP design, SEA activities are described for each of the following areas: planning, training, technical assistance, evaluation, and dissemination/expansion.

Overall Design. SITIP was designed by the SEA as a multi-year program consisting of interactive activities which are outlined below and presented in Figure 1.

1. Preparation (open systems planning): Identify needs and potential solutions. Identify operating constraints and opportunities, particularly existing programs or policies that could form a basis for action. Draft a design to apply solutions to needs within operating constraints, but with flexibility for improvement if necessary. Take care of logistics.

2. Initial Commitment: Review plan with LEA superintendents. Get commitment for local team attendance at awareness conferences. Distribute advance reading materials to participants.

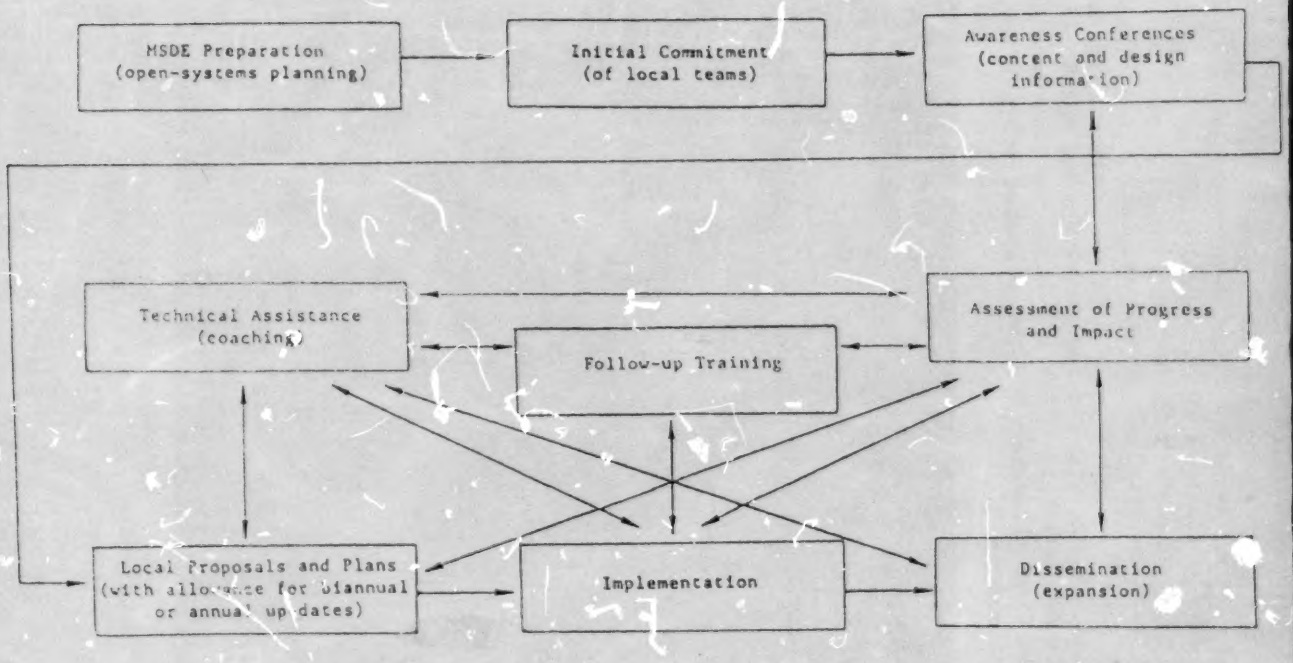


Figure 1. The SITIP Design: An Interactive Model for Program Improvement

3. Awareness Conferences (content and design information): Have each of the instructional improvement processes presented by its developer at awareness conferences attended by LEA teams, MSDE staff, and interested others. Describe design and nature of (voluntary team) involvement.

4. Local Proposals/Plans: Help LEAs draft proposals to implement one or more of the processes. Negotiate revisions as needed at the beginning of each school year to enhance useful implementation. Encourage cross-hierarchical participation in decision-making and realistic timelines and scope for implementation planned.

5. Implementation (incremental application): Help LEAs implement selected process(es) using their own strategies but involving representatives of all role groups. Encourage innovation fidelity but allow adjustment of scope if necessary.

6. Dissemination (expansion): Encourage use of the processes in many schools, and share information about successes between LEAs.

7. Technical Assistance (coaching): Assign MSDE staff (across divisions) to assist LEAs in planning, implementation, and dissemination; to conduct follow-ups; and to facilitate networking. Build capacity; do not create dependency.

8. Follow-up Training: Conduct an intensive three-day training session on each process for prospective implementers (teachers, school administrators, central office staff). Conduct annual or bi-annual follow-up training sessions (using participatory planning) to maintain quality implementation. Assist LEAs (central office staff) in planning/conducting turnkey training.

9. Assessment of Progress and Impact (cyclic): Have a "third party evaluator" collect and analyze data systematically and use (feedback) information to make improvements and publicize successes. (Data on local needs and concerns are of particular importance in planning/implementing every activity.)

Planning. MSDE planning began in mid-1980 when a preliminary design was developed. Following a systematic search for research-based instructional processes and consideration of the research on educational change, decisions were made to invite LEA reactions. Planning activities are illustrated by the following review of critical events involving LEAs.

- In the fall of 1980, original MSDE plans were complete, LEA superintendents had reviewed the design, and 20 had agreed to send local teams to the four Awareness Conferences.

- Following the Awareness Conferences local teams were invited to develop proposals to implement one or more of the four innovations. Nineteen proposals were submitted by April 1982, most of which did not reflect sufficient understanding of the processes to suggest successful implementation.

- In May 1982, MSDE staff conducted planning meetings for each innovation at which LEA representatives stated the needs they wanted addressed at the summer training institutes. MSDE staff also addressed some of the issues suggested by the local proposals.

- In September 1981, after the summer training, LEA teams were asked to meet with MSDE staff for a day to revise or clarify plans and develop summaries using PEPS forms. This was done because 1) the summer training had resulted in some LEAs deciding to adopt other innovations or make other revisions to their plans, 2) the LEA superintendents wanted to see a complete collection of the plans in a concise common format, and 3) MSDE staff assigned as technical assistants wished to meet with local teams to plan follow-up activities.

In addition to the above critical events, MSDE planning included involvement of senior MSDE staff (division directors) in decision-making, and monthly "review and refinement" discussions by the SITIP TAs under the leadership of the SEA assistant deputy superintendent. These discussions were influenced by findings presented in interim evaluation reports, by the field experiences of the TAs, and by ideas of senior MSDE staff (e.g., to link SITIP with other programs or areas such as Chapter I or teacher training by institutes of higher education). MSDE staff involved in SITIP planning based both content and process of the program on relevant research, reviewing (on an on-going basis) literature on the innovations, on school and classroom effectiveness, and on planned change.

Training. Training was provided by MSDE at three points in the program:

- Awareness Conferences were conducted at two-week intervals beginning December 4, 1980. LEA superintendents from 20 of the 24 LEAs agreed to send cross-hierarchical teams to all four in order to

determine whether they wished to implement any of the topics. MSDE staff and faculty of institutes of higher education were also invited. Advance reading materials were sent in November to all 300 invited guests. Each conference focused on one innovation and each was conducted by the developer or research team who designed the innovation.

- As part of the follow-up training for each innovation, developers conducted a three-day Summer Training Institute for local implementation teams and a one-day orientation session for MSDE staff.

- Subsequent follow-ups were designed and conducted by MSDE TAs for innovation implementers according to their needs. All included local "share and tell" sessions which facilitated networking, and three involved outside "experts" who clarified innovation elements and reinforced SITIP validity. For STL, each LEA team attended two follow-ups (with the second including classroom observation of STL), for AT and ML, teams attended a two-day "retreat," and for TV, each LEA team met once with two or three other teams that were geographically close by.

Training activities required considerable resources in terms of time, energy, and consultant fees. Factors contributing to some degree of dissatisfaction or only partially accomplished objectives included: inadequate communication of expectations (among participants and to presenters); insufficient attention by presenters to expressed needs of participants and to practical implications for implementation; insufficient opportunity for participants to share their ideas and concerns; and too much information or "off topic" information presented given available time, needs, and energy. Factors contributing to success included: credibility of presenters and validity of topics; use of time that allowed for varied activities, media, and interactions; clearly understood expectations by all involved; attention to participants' needs (in preparation) and to their interests and concerns (during the event); and use of focused, relevant, practical information with a sound knowledge base.

Technical Assistance. The technical assistance associated with SITIP was initially perceived as training (i.e., follow-up workshops), but was redesigned (e.g., to include on-site trouble shooting etc.) to meet local needs. In the summer of 1981, eight MSDE staff (two per innovation) were assigned to provide technical assistance. Drawn from six different MSDE divisions, TAs each expected to spend about two days a month on SITIP. Their activities were coordinated by the Assistant Deputy Superintendent (ADS). Their major objective was to facilitate implementation of local plans by providing information, building an interactive communication network, conducting training, and providing on-site assistance.

- General administration and budget were primarily the responsibility of ADS, who invited TAs to make requests or recommendations about allocation of funds (e.g., for follow-up sessions), and to participate in decision-making. Each TA partnership was responsible for monitoring LEA use of grants (an average of $5,000 per year per LEA), and for efficiently managing resources allocated for materials and training for a given innovation. General administrative and budget tasks were carried out by the ADS and administrators usually reporting to him (one of whom is "outside" the TA system). Combined effort of the TAs on administration and budget took less than 5% of their time spent on SITIP.

- Planning was an on-going process and occurred in several ways. At the monthly TA meetings members reviewed progress and planned improvements. They learned from each other how to facilitate local implementation, and they also looked for ways to coordinate SITIP with other state initiatives or educational groups. By mid 1982, planning concerns were both short-term and long-term, individual TAs offered more ideas, and some advocated various ways to coordinate SITIP with other activities and groups. The ADS involved members of the MSDE Instructional Coordinating Council (ICC) in planning by keeping ICC members informed and by inviting their input.

- Training (from a system perspective) included the three kinds of MSDE-initiated activities described in the chapter on training in this report. In addition, after each of the Summer Institutes and before the 1982 Conference the developer/presenters conducted training sessions which were open to all MSDE staff. SITIP TAs assisted in planning and participated in these events if they were

involved with SITIP at the appropriate time. This task area took about 22% of the TAs' SITIP time, with almost all spent on designing, organizing, and conducting the follow-up sessions.

- General support tasks took about 10% of the TAs' time and were the most frequent kind of interaction between LEAs and TAs. Most interactions were information exchanges or problem-solving discussions, while others were requests for materials or innovation clarification, and some focused on logistics such as making arrangements for site visits. Interactions were almost all by phone, each required individual attention by the TA functioning as the key contact, and several required subsequent action such as linking LEAs with similar interests or obtaining and sending materials.

- Site visits took over 40% of the TAs' time, since each innovation site was visited at least twice during the 1981-82 school year. These visits were not for compliance monitoring although TAs did gain an understanding of the nature and extent of implementation at each site. In some cases TAs conducted training or assisted central office staff in designing or conducting training. TAs always visited classrooms and usually talked with all three LEA role groups. They collected copies of locally developed materials and distributed others. They participated in trouble shooting to address concerns of one or more role groups, and exchanged "good ideas" learned at other sites or from innovation developers. They helped LEAs contact developers when necessary. In general, they provided resource support (money, materials), technical support (expertise, training), process support (ideas about alternative ways of getting things done), and affective support (recognition and acknowledgement of local efforts). Individual style or degree of formality varied, but all TAs understood local norms and observed local protocol, and most tried to establish colleagial relationships with local educators.

- Evaluation of SITIP was conducted by RBS. TAs did not evaluate local implementation. Each LEA was responsible for evaluating itself. Since local expertise in evaluation was varied, and since it was not cost-effective for each LEA to duplicate efforts in development of measures etc., the TAs explored ways to build local capacity without increasing effort invested.

- Communication within the TA system was interactive. Communication between SITIP and other organizational groups was important because SITIP was designed as a collaborative effort, and because if it was to survive and grow it could not have "project" status but should be incorporated into or coordinated with related instructional activities. Since the TAs were drawn from five MSDE divisions and the Office of Project Basic each could act as a boundary spanner. TAs spent 10% of their time maintaining communication with each other and with coordinating groups. This time included system planning and some knowledge building.

- Dissemination is defined here as involving or informing others about SITIP, beyond those intended in the original plan. To date, SITIP TAs have been involved in two dissemination activities: 1) they assisted ADS in making presentations at a Regional School Improvement Conference, and 2) they exchange information with developers and conference presenters who in turn tell others about SITIP (subsequently resulting in inquiries from other states). These activities took about 6% of the TAs time over the seven-month period. Plans are underway to involve professional associations, and to increase involvement of institutes of higher education.

- Problems TAs experienced included: competing responsibilities, demands on their time, and some initial confusion in adjusting workloads.

- In working with LEAs, TAs had to learn to deal with bureaucracy, develop non-standardized strategies and materials to satisfy varying local needs, discourage competition, and maintain energy and enthusiasm.

- A task orientation and drive toward social power (democratic shared leadership for the benefit of the local implementers) were appropriate for effective delivery of technical assistance. Incentives included evidence of group success, acknowledgement by supervisors of TA efforts, and opportunities to learn more or take on additional responsibilities.

- The nature and extent of local implementation would have been considerably less without the TAs. They provided information and encouragement, established networks and shared successes, and crossed hierarchical boundaries to help LEAs resolve problems. Their efforts were well-received by local educators with whom they interacted, since the TA role was quickly understood and appreciated by almost everyone.

Evaluation. Assessment of progress and impact was conducted by RBS using an action research approach in which data were analyzed and reported back to MSDE frequently. The study addressed both MSDE and LEA activities. Four general areas addressed were: 1) training, 2) planning, 3) local implementation, and 4) technical assistance. (Measures and methods are outlined earlier in this paper.)

Dissemination/Expansion. Expansion of SITIP is occurring in four ways: 1) involvement of all LEAs and involvement of more schools and

teachers in implementation, 2) annual statewide instructional leadership conferences, 3) knowledge and capacity building for system-wide instructional improvement, and 4) information sharing with institutes of higher education. Each is summarized below.

- As of October 1982, all 24 LEAs were implementing one or more of the four instructional innovations. The MSDE technical assistants are encouraging expansion within systems, and state funding continues through the 1982-83 school year.

- In April 1982, the statewide conference included presentations by Barak Rosenshine (on classroom effectiveness research) and Robert Bush (on staff development). Over 300 Maryland educators attended the conference, some of whom were already involved in SITIP. The 1983 conference will include presentations by Karen Seashore Louis (on planned change), Madelaine Hunter (on effective teaching), and local SITIP teams (on the four innovations).

- To facilitate the development of a common knowledge base, a research synthesis on classroom and school effectiveness and planned change was developed. The paper (Instructional Improvement: A System-Wide Approach) was distributed to MSDE and LEA assistant superintendents, MSDE Title I staff, SITIP technical assistants, and Project Basic facilitators. Each group participated in a conference or seminar, and participants were encouraged to share relevant information with other educators or incorporate ideas into existing programs.

- In order to exchange information with institutes of higher education, MSDE initiated a series of conferences in the 1982-83 school year focusing on research on teacher effectiveness. Information about SITIP was included.

Summary. In general, the SEA role was that of resource coordinator, with resources including not only funding and technical assistance but also a sound research base and a system of data-based decision-making. The coordination reflected a philosophy of cross-hierarchical communication and voluntary participation with a clear SEA initiative.

Roles and Responsibilities of Local Educators

Within each LEA three main role groups were identified: central office (CO) staff; school-building administrators (SA), who were principals, vice

principals or secondary school department heads; and teachers. In subsequent sections of this paper roles and responsibilities of each of those role groups is discussed. Here, some general findings are presented.

The following discussion addresses the areas of planning, training, and implementation. It is important to note that each LEA was free to chose any or all of the four innovations, to develop its own implementation strategies, and determine scope and intensity of use. "Success" is related to the needs and intentions of each LEA.

Planning. Elements of planning that had a direct relationship to successful implementation included: 1) cross-hierarchical participation, 2) cyclic interaction with training and assessment to allow for data-based decisions, and 3) alignment of innovation(s), scope, and implementation strategy in relationship to local interest and resources. These elements were influenced by local organizational norms.

Training. As agreed by the superintendents of the 19 LEAs, training events conducted by the SEA were attended by cross-hierarchical teams, with over 50% of the individuals attending two or more of the three events. Those trained by the SEA frequently trained others in their LEAs. Local teams influenced the summer institutes and follow-up sessions by discussing their needs and concerns with SEA staff designing those events. Feedback data indicated that most expressed needs were met.

Implementation. Local implementation has been discussed in terms of strategies and scope and intensity early in this paper. Here, the focus is on participation, activities and levels of effort, interactive support, perceived impact, and participant needs and concerns. Participation in

MSDE-initiated planning and training events by local educators impacted implementation:

- Sustained involvement of specific individuals was important to maintain continuity. At six sites (four lighthouse schools and two capacity building LEAs) no one sustained participation in all six activities. At three of those sites problems resulted: 1) lack of awareness of related activities in other LEAs stressed within-LE resources (expertise, networking support), and 2) commitment and energy to implement were relatively low.

- Where role group participation was adequate (i.e., involvement in at least two training and two planning activities) fewer communication problems occurred (all but one LEA).

- Where role group participation was adequate and at last one person from each role group sustained involvement in all activities, the only implementation problem that was apparent related to scope, i.e., plans were slightly more ambitious than could be carried out (two ML sites).

- Where role group participation was adequate and the person(s) assuming leadership sustained involvement (12 LEAs), few implementation problems occurred as long as leaders shared information with others.

Levels of effort (time and energy) were estimated (on a scale of 0 -- none to 6.00 -- a great deal) by CO staff and school administrators for six given areas of activity: 1) administration (including planning and budget), 2) development of materials, 3) designing and/or conducting inservice, 4) supporting school-based implementation (e.g., problem solving, supplying materials), 5) dissemination, and 6) evaluation. Overall patterns of level of effort were similar across innovations, with the least difference for inservice. All three role groups also rated work required by SITIP in comparison to other similar innovative programs, using a scale of 1.00 (substantially less time) to 5.00 (substantially more time) for five activities: 1) becoming informed, 2) interacting with school personnel, 3) preparing or organizing materials, 4) record keeping, and 5) evaluation. Specific findings are presented later for each role group.

Given the dominant strategies and the relative complexity of the innovations as implemented, the following points are of interest:

- Active Teaching made greater demands on the people organizing and supporting implementation than it did on the teachers using it, with the greatest combined effort spent on learning/training for innovation use, and supporting implementation through staff interaction. Teachers found AT relatively undemanding.

- Mastery Learning made more demands on teachers than on other role groups, although both school administrators and central office staff spent time on becoming informed, on interactive support, and on administration.

- Student Team Learning was more demanding for school-based staff than for central office staff, with most combined effort spent on learning/training and interactive support.

- Teaching Variables was relatively undemanding for school-based staff, with central office staff spending most time on interactive support and learning about the innovation.

- The average investment of effort, combining all role groups per innovation, related to the complexity of the innovation as implemented, with most for ML, followed by TV, STL, and AT.

- The patterns of investment (how work was shared among role groups) were related to the implementation strategy used for all innovations except TV. (In that case the nature of the innovation influenced patterns depending on who carried out the observation tasks. This decision was influenced by the organizational norms of the LEA.)

The implementation strategies selected and the complexity of the innovations as implemented largely determined the nature and extent of interactive support. A third influential factor was individual commitment, demonstrated by initiative, encouragement of others, and taking on work that needed to be done. These (leadership) behaviors were sometimes demonstrated by CO staff or school-based administrators, but were also apparent in people with no formal authority. For an innovation to be successfully implemented, each site needed an advocate or team perceived by local participants as being "in charge." Problems occurred when there was

uncertainty about project leadership and when school-based staff were not informed of central office plans or decisions or did not receive materials sent to central office by MSDE or topic developers. Positive affect and high productivity were likely when everyone understood what was to be done and appropriate resources were made available. Perceptions of support were strongly influenced by visibility. That is, if respondents came in contact with supporters or saw clear evidence of support they were more likely to give a favorable rating. If respondents received support "second-hand" they were more likely to credit the supporter they saw rather than another who may have initially developed or organized the support received. (See Table 5).

Perceived impact is summarized in Table 6, with responses generally positive for this initial year of implementation. Since projects are for two years, assessment of impact will not be formally made until 1983.

At the end of the 1981-82 school year needs and concerns of local implementers fell into four general categories: support, training, dissemination, and changes to the innovation. Also, about 24% of responses indicated that no changes were needed. Needs are summarized here. (These needs are to be addressed in the second year of implementation.)

- Support needs were defined by respondents as demonstration of commitment and involvement (especially from central office staff), clear communication (especially relating to guidelines or plans), provision of materials, planning time or provision of teacher substitutes or aides to allow for common planning by participating teachers, and problem-solving assistance for teachers. Most such needs were identified for AT and TV. About 15% of responses identified support needs.

- Training or inservice needs were identified by about 17% of the respondents, with most for AT and ML. Several respondents said they would prefer to learn by inter-class or inter-school visits followed by "sharing sessions" rather than by formal workshops.

Table 5

Perceptions of Support Received, by Innovation and Role

Topics and Respondents	N	Sources of Support: Teachers	School Administrators	Central Office Staff	MSDE	Developers
Active Teaching						
CO	7	4.12	4.12	4.14	4.00	3.57
SA	21	3.76	4.00	3.75	3.58	3.50
T	98	3.45	3.67	3.66	2.88	2.96
TOTAL	126	3.54	3.74	3.70	3.09	3.07
Mastery Learning						
CO	7	4.43	4.14	4.00	3.71	4.14
SA	8	4.25	4.67	4.75	4.50	4.50
T	53	3.39	3.59	3.14	3.13	3.14
TOTAL	68	3.59	3.75	3.39	3.33	3.40
Student Team Learning						
CO	7	4.43	3.86	4.40	4.57	4.71
SA	8	4.43	4.00	4.00	4.44	4.11
T	37	3.66	3.90	3.14	3.90	4.08
TOTAL	52	3.88	3.91	3.41	4.07	4.17
Teaching Variables						
CO	6	4.50	4.50	4.00	3.67	3.33
SA	5	4.60	4.25	3.40	4.40	4.00
T	16	3.56	3.50	2.81	3.25	3.19
TOTAL	27	3.96	3.85	3.19	3.56	3.37
TOTAL						
CO	27	4.36	4.14	4.14	4.00	3.96
SA	42	4.08	4.16	3.95	4.01	3.87
T	204	3.48	3.87	3.36	3.16	3.23
TOTAL	273	3.66	3.78	3.52	3.39	3.40

Mean ratings range from a low of 1.00 (very poor) to a high of 5.00 (excellent).

Table 6

Impact of Innovations as Perceived by Active Implementers (June 1982)

Areas of Impact \ Topic / Role / N =	Active Teaching				Mastery Learning				Student Team Learning				Teaching Variables				Overall			
	CO	SA	T	Total	CO	SA	T	Total	CO	SA	T	Total	CO	SA	T	Total	CO	SA	T	Total
	9	27	125	161	8	8	56	72	7	9	38	54	6	5	16	27	30	49	235	314
Instructional value																				
It is worthwhile/workable.	4.67	4.48	4.28	4.33	4.37	4.81	3.89	4.05	4.71	4.70	4.22	4.36	4.16	4.35	3.81	3.98	4.50	4.56	4.14	4.24
It is more work that it's worth.	1.56	1.70	2.06	1.97	2.75	2.38	3.00	2.90	1.86	2.22	2.03	2.04	1.83	2.20	2.56	2.33	2.00	1.96	2.31	2.22
Impact on teachers																				
Ts enjoy it.	3.89	3.21	3.60	3.65	4.00	4.13	3.48	3.61	4.57	4.22	3.92	4.06	3.50	3.80	3.07	3.31	4.00	3.61	3.59	3.68
Ts gain knowledge.	4.11	3.93	3.53	3.63	4.63	4.63	3.63	3.85	4.14	4.44	4.18	4.22	4.17	4.20	3.75	3.97	4.27	4.17	3.67	3.81
Ts increase skills.	4.33	3.96	3.65	3.74	4.25	4.50	3.49	3.69	4.00	4.25	3.95	4.00	4.17	4.25	3.69	3.89	4.17	4.13	3.66	3.79
Impact on students																				
Ss enjoy it.	3.89	3.67	3.82	3.80	4.00	4.38	3.74	3.84	4.86	4.78	4.32	4.46	3.00	3.80	3.19	3.26	3.97	4.08	3.84	3.88
Ss are more involved in work.	4.44	4.30	3.82	3.93	3.75	4.13	3.53	3.62	4.43	4.13	4.00	4.08	3.50	3.50	3.44	3.46	4.07	4.16	3.75	3.85
Ss increase achievement.	3.50	3.62	3.50	3.52	3.56	3.93	3.37	3.46	3.79	3.95	3.64	3.70	3.09	3.68	3.13	3.25	3.50	3.75	3.47	3.51
Time																				
Ts spend more time preparing Ss.	3.11	2.81	2.71	2.75	4.37	4.00	3.87	3.94	4.00	3.78	3.55	3.64	2.33	2.20	3.06	2.74	3.50	3.12	3.15	3.18
Ts cover curriculum in less time.	3.11	3.00	2.93	2.95	2.50	2.87	2.86	2.33	2.57	2.78	2.37	2.46	2.83	2.80	2.56	2.67	2.77	2.92	2.80	2.70

NOTE: Mean ratings range from 1.00 (Strongly Disagree) to 5.00 (Strongly Agree).

CO = central office
SA = school administrator
T = teachers
S = student

- While about 21% of responses (about evenly spread across processes) recommended dissemination for expansion of topic implementation to other classes or schools or by use of other variables (TV) or methods (STL), about 3% suggested that implementation should stop or that processes should be used only by volunteers.

- Changes to the topic were recommended by about 24% -- all for AT. It is likely that this group of respondents needs more accurate information about the relative flexibility of the process, and they may also need to be involved in activities to increase commitment.

Roles and Responsibilities of Central Office Staff

Central office staff roles and responsibilities are summarized in terms of planning, training, and implementation.

Planning. LEA superintendents reviewed state plans in the fall of 1980 and made choices based on the extent to which SITIP appeared to relate to local priorities. Subsequently, central office (CO) staff were invited to participate in the three planning activities initiated by MSDE (proposal writing, spring and fall planning meetings), and encouraged to apply principles such as cross-hierarchical decision-making and interactive support. Unless local plans specified school-based leadership (as happened in one LEA) it was assumed that central office staff would be involved in all planning activities. With one exception, all LEAs involved CO staff in proposal writing; thirteen LEAs (68.42%) involved CO staff in spring and fall planning sessions. Low involvement in planning by CO staff caused problems (two LEAs -- school staff discontent) only when two issues were not clearly understood and agreed upon: 1) the implementation strategy and its implications, or 2) leadership -- responsibility for trouble-shooting and providing support to teachers. Such misunderstanding, caused by poor communication during planning, had negative effects during implementation in two LEAs.

Training. LEA superintendents agreed to send cross-hierarchical teams to the three kinds of training events conducted by MSDE. In most cases this occurred. CO staff from all 19 LEAs attended Awareness Conferences, CO staff from 17 LEAs attended Summer Institutes, and CO staff from 16 LEAs attended follow-up sessions. With the exception of one LEA, all LEAs sent CO staff to at least two training events. Lack of involvement in training by CO staff at that site caused no problems since leadership was assumed by the school principal.

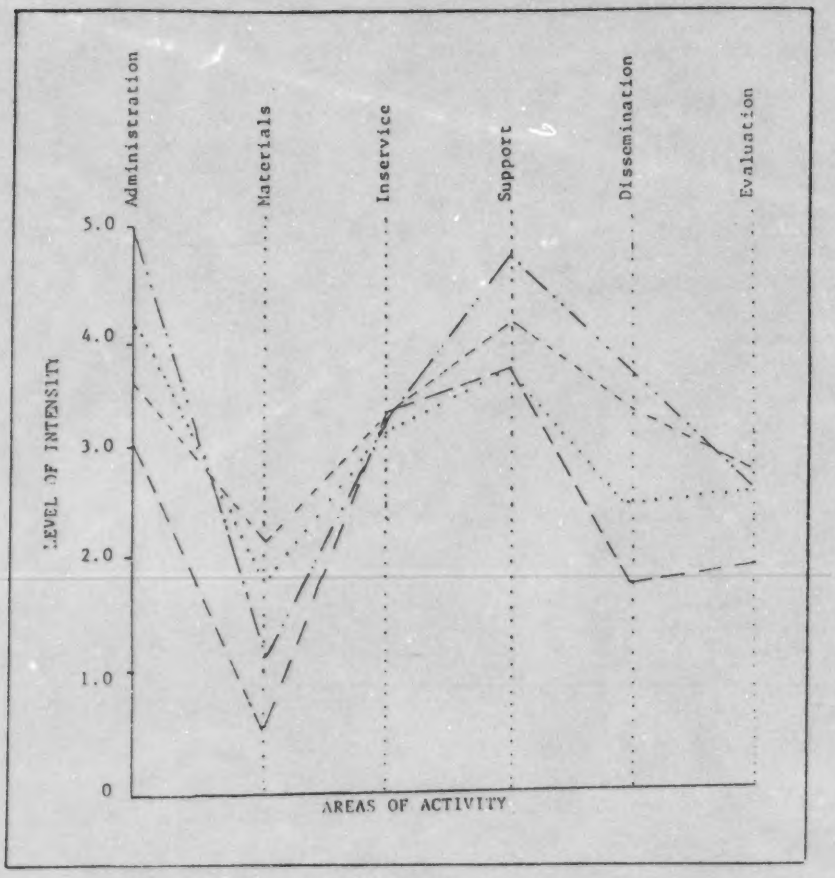
Implementation. Levels of effort invested by CO staff in six areas of activity are presented in Table 7, with levels ranging from 1.53 (materials development) to 4.13 (support). Overall patterns are similar across innovations, with the least difference for inservice. Time spent on SITIP in comparison to other similar projects (see Table 8) was about the same for materials development (all innovations), but slightly more demanding in terms of becoming informed and interacting with school staff (all innovations except STL), and for record keeping and evaluation (AT and TV). STL took about the same amount of time as other projects.

For interactive support, CO staff consistently awarded high ratings, placing themselves first only for AT. Average or below average ratings were awarded to CO staff for ML, STL, and TV by teachers. Active CO support encouraged school level implementation and plans for expansion.

In general, lack of support and involvement of CO staff did not prevent implementation if leadership was assumed at the school site and if CO staff did not then hinder that leadership. However, school staff involved in the more complex innovations or employing strategies other than the "lighthouse school" wanted to share the workload with CO staff, and if support was low, scope of implementation decreased.

Table 7

Level of Effort: Central Office Staff
(All Innovations)



Mean ratings range from a low of 0 (none) to a high of 5 (a great deal).

_ _ _ _ Active Teaching

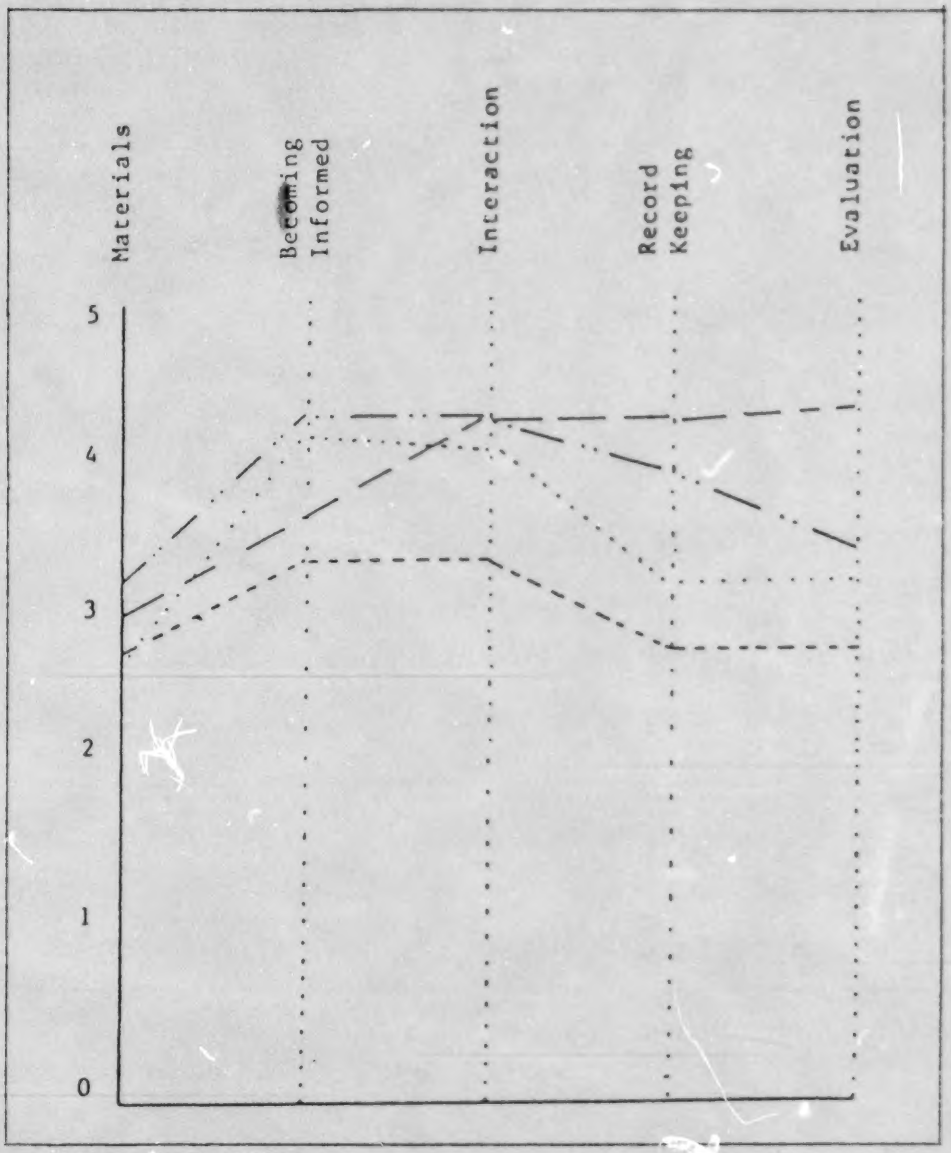
_ _ _ _ _ _ Student Team Learning

..... Mastery Learning

__ .. __ .. Teaching Variables

Table 8

Time Spent in Comparison to Other Projects:
Central Office Staff



Mean ratings range from a low of 1.00 (substantially less time) to a high of 5.00 (substantially more time).

_ _ _ _ Active Teaching

\- - - - - - Student Team Learning

. . . . . Mastery Learning

_ .. _ .. Teaching Variables

Summary. A generally effective CO role was that of resource coordinator, especially in approving release time, arranging for inservice, or providing support services such as data processing or trouble-shooting assistance. Also, effective CO staff were general coordinators, linking across school sites and between SEA and LEA to ensure accurate and timely communication, and acknowledgement of the value of SITIP activities. When the selected implementation strategy was not a "lighthouse school," CO staff needed to provide leadership if the project was to succeed.

Roles and Responsibilities of School-Based Administrators

Roles and responsibilities of school-based administrators (SAs) are summarized here in terms of planning, training, and implementation.

Planning. With the exception of four counties, all LEAs involved SAs in at least two of the three SEA-initiated planning activities. In two of those four LEAs, principals were reassigned during or just prior to implementation. The new principals were brought up to date by both teachers and CO staff. No problems were apparently caused by low involvement in planning by SAs. However, it should be noted that at all four sites with low involvement, local plans required leadership either from CO staff or from teacher-coordinators, rather than from school administrators.

Training. With the exception of two sites, all LEAs sent SAs to at least two of the three kinds of SEA-sponsored training events, although there was slightly less SA participation in the summer institutes than in awareness conferences or follow-up sessions. Lack of SA involvement in training caused no problems at the capacity-building site since leadership and staff development responsibilities were assumed by CO staff. At the

lighthouse site, teachers expressed concern over lack of administrative support which may have been influenced by the fact that the principal attended only the awareness conference.

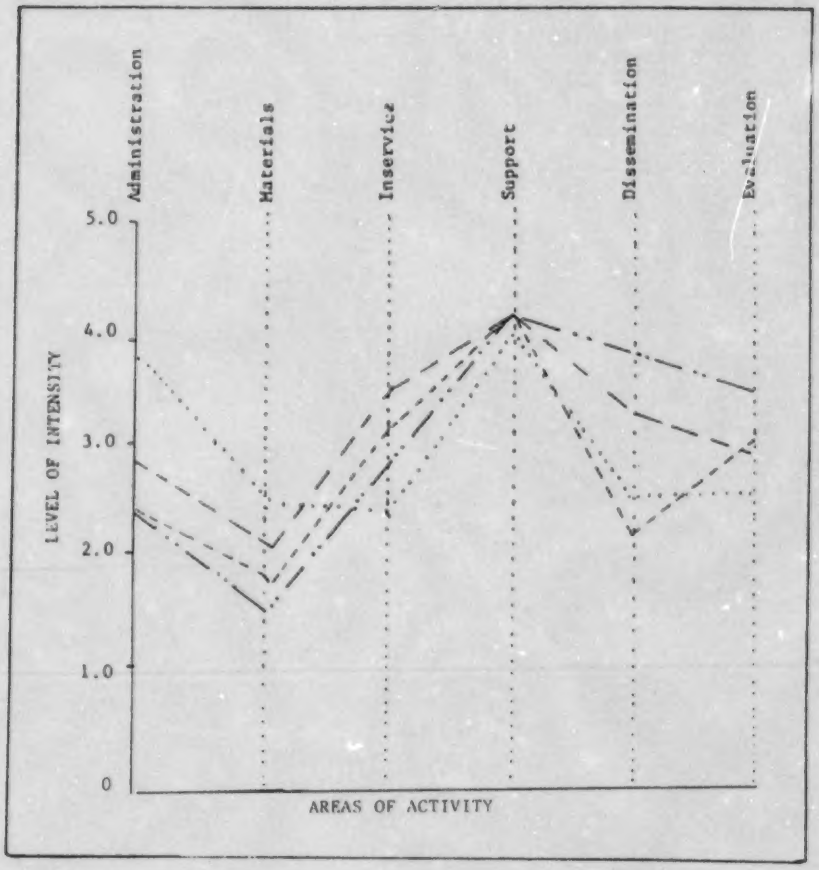
Implementation. Levels of effort invested by SAs in six areas of activity are presented in Table 9. For all innovations investments were similar for materials development, training, and support, and for three innovations were similar for administration. Small differences were apparent for dissemination and evaluation. SITIP took more time than other similar projects for all activity areas except materials development (AT), record keeping (AT), and evaluation (AT and TV), with most investment in becoming informed about STL. (See Table 10.) In six of the 65 SITIP schools (46% of the lighthouse school sites) project leadership was assumed by principals.

For interactive support, SAs consistently awarded fairly high ratings, perceiving teachers as slightly less supportive than themselves for AT and ML and more supportive for STL and TV, and finding CO staff more supportive for ML, equal to themselves for STL, and less for AT and TV. Combined ratings gave SAs highest scores for all innovations except TV. (See Table 5.)

Summary. A generally effective SA role was that of supportive facilitator or manager, ensuring that teachers' personal concerns were addressed, that logistical matters were taken care of, and demonstrating sincere interest in and appreciation of teachers' activities. The more complex the innovation, the more important it was for school administrators to provide active support.

Table 9

Levels of Effort: School Administrators
(All Innovations)



Mean Ratings range from a low of 0 (none) to a high of 5 (a great deal).

_ _ _ _ Active Teaching

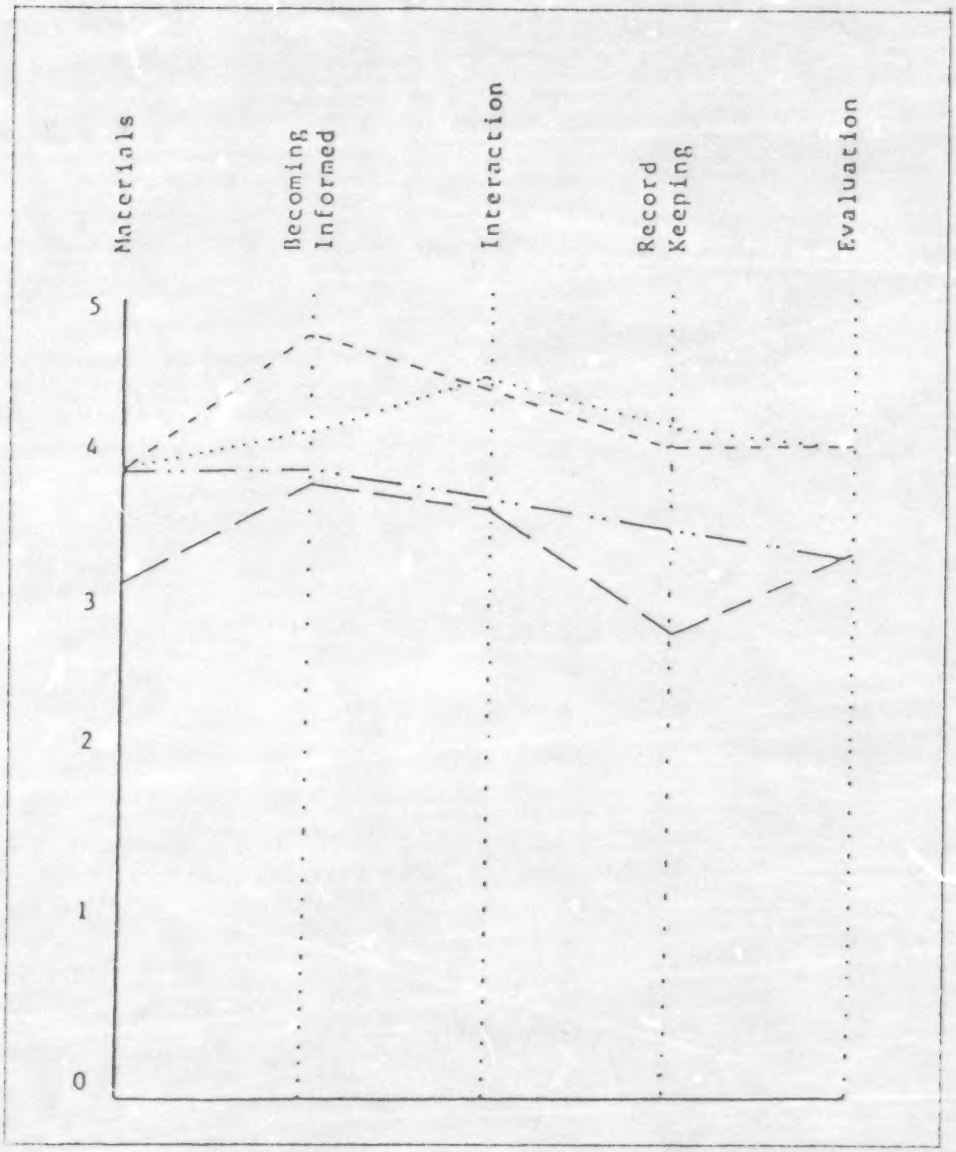
_ _ _ _ _ _ Student Team Learning

..... Mastery Learning

_ .. _ .. Teaching Variables

Table 10

Time Spent in Comparison to Other Projects:
School Administrators



Mean ratings range from a low of 1.00 (substantially less time) to a high of 5.00 (substantially more time).

__ __ __ __ Active Teaching

- - - - - - Student Team Learning

..... Mastery Learning

__ .. __ .. Teaching Variables

Roles and Responsibilities of Teachers

Teacher responsibilities are summarized in terms of planning, training, and implementation.

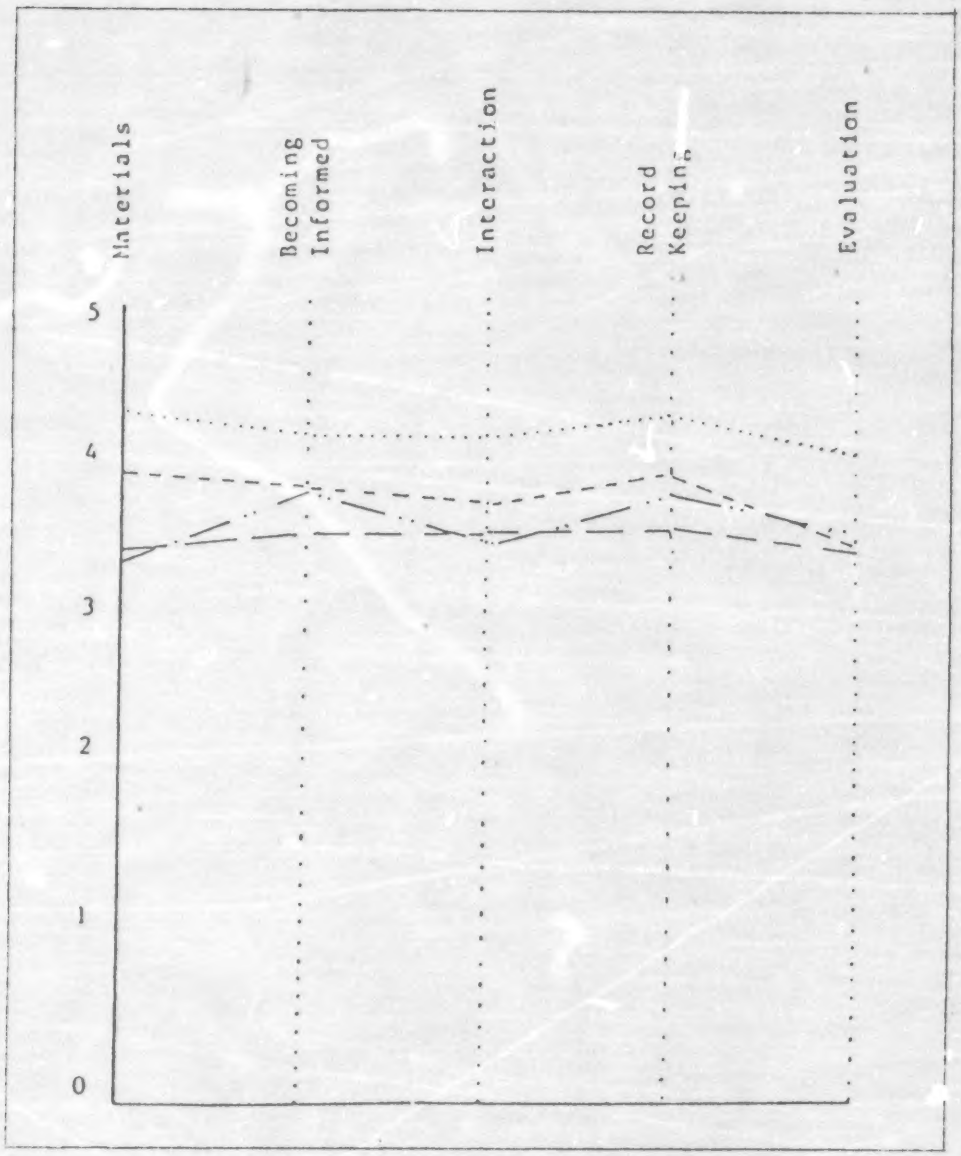
Planning. Cross-hierarchical participation in the three SEA-initiated planning activities (proposal writing, Spring and fall planning meetings) was encouraged by MSDE. With the exception of four counties (five topic sites), all LEAs involved teachers in at least two planning activities. In those LEAs with low teacher involvement in planning, problems appeared in two cases, both relating to teachers' personal concerns about the impact and demands of the innovations, and resulting in resistance to implementation. To some extent, these concerns were alleviated by on-site training and assistance provided by school administrators and developers.

Training. LEA superintendents agreed to include teachers as part of the LEA team sent to the three SEA-sponsored training events (awareness conferences, summer institutes, and follow-up sessions). All the LEAs sent teachers to at least two of the three training events, usually the summer institutes and follow-ups.

Implementation. Teacher time spent on SITIP in comparison to other similar projects is presented in Table 11. Teachers found that all topics required more time in all five activity areas, with ML most demanding in all areas. The most demanding activity for AT and TV was becoming informed and for ML and STL was preparing or organizing materials. The least demanding activity was evaluation for AT, ML, and STL and preparing or organizing materials for TV.

Table 11

Time Spent in Comparison to Other Projects:
Teachers



Mean ratings range from a low of 1.00 (substantially less time) to a high of 5.00 (substantially more time).

_ _ _ _ Active Teaching - - - - - - Student Team Learning

..... Mastery Learning _ .. _ .. Teaching Variables

For interactive support, teachers consistently awarded lower ratings to all support sources than did other role group, and for all innovations except TV they rated other teachers as less supportive than school administrators. Nearly all ratings indicate that each role groups provided very good to excellent support. However, teachers gave average or below average ratings to other teachers for AT and ML and to central office staff for ML, STL, and TV. Combined ratings across the role groups awarded teachers highest in support for TV and second highest for all other innovations. (TV was the only innovation actually requiring teacher interaction.)

In several cases teachers who had attended SEA-sponsored training subsequently trained others in their LEA. While this was organizationally effective and gave those trainer-teachers recognition, the people involved were reluctant to be pulled away from their regular classes too often. Another task that was demanding for teachers was curriculum and test development or revision required for ML. Without team common planning time and/or help from SAs or CO staff for this task, teachers' concerns escalated.

For an innovation to be successfully implemented, each site needed a process advocate or team perceived by local participants as being "in charge." Seven LEAs had teachers as process advocates. These teacher-coordinators were present in eight schools and across all four innovations. Five of these coordinators previously held positions of authority and three "evolved" into the leadership role. In all cases they provided the "energy" to keep implementation going, and in several cases they developed methods or systems to facilitate implementation.

Summary. Teachers not only implemented the instructional processes in their classrooms, but were also involved in materials development (mostly ML) and training (mostly STL). At seven LEAs (eight school sites) teachers assumed leadership roles, taking responsibility for "energizing" and organizing implementation within that school.

Conclusions

For statewide instructional improvement, it appears that effective roles are as follows:

- SEA staff initiate, encourage voluntary participation, build and maintain commitment, and provide (research-based) assistance as resource coordinators.
- Central office staff engage in cross-hierarchical communication, linking schools and LEA to SEA, and act as resource coordinators by providing various support services. If implementation is in more than one school, CO staff function as "project directors."
- School-based administrators ensure that teachers' concerns are addressed (logistical and affective), and function as supportive facilitators or managers, sometimes with "project director" status if a "lighthouse school" strategy is used.
- Teachers carry out classroom implementation tasks. Also, teacher representatives support others by "turnkey training" especially for capacity building sites, and, when implementation is single-school focused, teachers can function as "project directors" if administrators (school or central office) do not take on that responsibility.

Other findings of this study, relevant to role group responsibilities suggest the following conclusions:

- Initial staff interest or commitment to implement a new program or practice can be built if: 1) the LEA superintendent permits staff to look at new ideas with the intent to implement if appropriate, 2) the innovation and its presenter/developer have validity and credibility, and 3) staff believe that they do have choices and can influence decisions.

- Staff interest (of all role groups, but particularly those that have the most work to do) is the most important factor in selection of the innovation and in determination of elements of the implementation plan.

- Cross-hierarchical planning facilitates mutual understanding which helps to prevent problems during implementation (such as communication breakdowns, resentment, feelings of isolation).

- Representation of the various role groups in planning and subsequent decision-making builds understanding and commitment, ensures inclusion of role group perspectives, and strengthens organizational knowledge so that if reassignments are made knowledge is not lost and new staff will not be given a one-sided briefing.

- The complexity of the innovation determines the amount of work to be done for a given school site.

- The implementation strategy determines how the work is shared among role groups and how the burdens shift among role groups over time.

- The implementation strategy plus the scope (number of schools, teachers, curricular subjects, grade levels, amount of time for the innovation to be used for each class or subject) determine how much work is to be done within a given LEA.

- The nature and extent of communication and decision-making determine productivity and affect.

- The organizational norms of the LEA determine communication and decision-making procedures.

- Changes in organizational norms are influenced by two forces acting almost simultaneously but not necessarily collaboratively: external "pressures," e.g., TA recommendations; and internal "pressures," e.g., topic advocate recommendations or teachers' concerns.

- Regardless of the nature of the innovation all role groups must carry out certain tasks which are, in order of investment: 1) interactive support (acknowledgement, shared knowledge, problem-solving, resource allocation); 2) learning/training (before and during implementation); 3) record keeping; 4) materials identification or development; 5) evaluation; and 6) administration.

- Perceptions of interactive support reflect participants' assessment of each others' commitment. Judgements are based not only on how much useful help was provided but also on the visibility of the supporter (with lower ratings for low visibility).

- It is preferable for each role group to perceive high support from close role groups rather than distant ones. Therefore, visibility should be reduced with distance (e.g., Teachers should perceive principals as supportive. If there is a problem a state TA may help central office staff (who turnkey ideas to the principal) or the TA (with central office permission) may help the principal. But the state TA does not provide support to the teachers when it should more appropriately come from the principal).

- Representatives of all role groups need a thorough understanding of innovations to be adopted so that: 1) plans are realistic, 2) re-assignment do not result in the organization's loss of knowledge, 3) interactive support can occur, 4) no one group is overburdened, and 5) there is a reasonable chance for institutionalization and dissemination beyond initial pilot sites.

- Impact in terms of student achievement was evident to some extent, although not formally expected for the first year of implementation. Results suggest (tentatively) that greatest impact was made by Mastery Learning, followed by Active Teaching. Student Team Learning appeared to influence student affects more than achievement. Teaching Variables data are inconclusive.

- People providing technical assistance (TA) are most effective when they are: 1) responsive to the needs of the group (of implementers), 2) task oriented and knowledgeable about local norms, the innovation, and processes of planned change, and 3) skillful in facilitating shared decision-making and coordinated communication.

- Designs or plans for instructional improvement are most likely to be successful if: 1) participation (of organizations) is voluntary, 2) communication is multi-dimensional, 3) planning is interactive with training, 4) training and technical assistance are provided during implementation, 5) "lip service compliance" is not accepted as implementation, 6) adjustments of scope are considered legitimate and relate to resources available, and 7) each participant has some degree of choice about his or her involvement (nature or extent) in the effort. These elements were present in SITIP.